

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Washington, D.C. 20460

SEP 21 2007

Office of Solid Waste and  
Emergency Response

MEMORANDUM

**SUBJECT:** Request for a Ceiling Increase to Exceed \$6 Million for the Removal Action at the Elkton Farm Firehole Site, Elkton, Cecil County, Maryland

**FROM:** Deborah Y. Dietrich, Director  
Office of Emergency Management (5104A) *D. Dietrich*

**TO:** Susan Bodine, Assistant Administrator  
Office of Solid Waste and Emergency Response (5101T)

This memorandum requests your approval of the Action Memorandum for Region 3's request for a ceiling increase for the ongoing removal action at the Elkton Farm Firehole Site in Elkton, Maryland. This Action Memorandum requests a proposed ceiling increase of \$5,900,000, which will bring the total project ceiling to \$11,800,000.

The threat posed by Munitions of Explosive Concern (MEC), Discarded Military Munitions (DMM) and the recent discovery of asbestos-containing material (ACM) on this 55-acres site warrant this continued response action. In March 2006, EPA initiated removal actions at the site for Phase I, working through an interagency agreement with the U.S. Army Corps of Engineers (USACE) – Baltimore District. Phase I included performing magnetometer surveys (magging) on a grid-by-grid basis, followed by digging operations to remove MEC. In July 2006, USACE initiated Phase II activities to address the excavation and sifting of the fireholes. As of this date, removal activities yet to be completed include the following:

i. Continue activities to complete removal of MEC from the site using the standard magging approach in Phase I and an excavation and soil separation using water in the Phase II geographical areas;

ii. Separate MEC from construction debris and tile with ACM. Dispose of the MEC. Stage the remaining construction debris with ACM in covered piles. The OSC estimates that approximately 11,000 cubic yards of this material will be separated and staged onsite.

According to EPA Delegation 14-2, only the AA of OSWER has the authority to approve emergency exemptions for sites that will cost more than \$6 million.

I recommend that you approve Region 3's request. Extensive removal work is presently ongoing at the Site, and your approval will allow for the completion of the removal action. The conditions at the site meet the emergency exemption criteria under §104(c) of CERCLA. This action will be funded from Region 3's removal budget. Please indicate your decision by signing below.

APPROVE: Dee Parker Baseline DATE: 9/24/07  
Assistant Administrator  
Office of Solid Waste and Emergency Response

DISAPPROVE: \_\_\_\_\_ DATE: \_\_\_\_\_  
Assistant Administrator  
Office of Solid Waste and Emergency Response

Attachment



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

SEP 21 2007

**SUBJECT:** Request for a Ceiling Increase to Exceed \$6 Million for the Removal Action at the Elkton Farm Firehole Site, Elkton, Cecil County, Maryland

**FROM:** James J. Burke, Director *J Burke*  
Hazardous Site Cleanup Division

**TO:** Susan Bodine, Assistant Administrator  
Office of Solid Waste and Emergency Response

**THRU:** Deborah Y. Dietrich, Director *Deborah Y Dietrich*  
Office of Emergency Management

**ATTN:** Gilberto Irizarry, Director  
Program Operations and Coordination Division

**I. PURPOSE**

The purpose of this Action Memorandum is to request a ceiling increase to exceed \$6 million for the Elkton Farm Firehole ("Site"). The Site is located at 183 Zeitler Rd., Elkton, Cecil County. The project ceiling increase requested in this Action Memorandum will allow the U.S. Environmental Protection Agency (EPA) to continue to address threats posed by extensive munitions of explosive concern (MEC) located at the 55-acre site. This Action Memorandum requests a ceiling increase of \$ 5,900,000, of which \$5,500,000 is from the Regional removal allowance for mitigation contracting. The total project ceiling would be raised to \$11,800,000 of which \$10,850,000 would be for mitigation contracting.

On September 28, 2005 Mr. Abraham Ferdas, Director, Hazardous Site Compliance Division approved the \$2 million and One Year Statutory Exemption Action Memorandum for the Elkton Farm Firehole Site (Attachment A). On July 19, 2007 Mr. James Burke Director, Hazardous Site Compliance Division approved a Ceiling Increase and Change of Scope Action Memorandum for the Elkton Farm Firehole Site (Attachment B). This Action Memorandum requests additional funding to exceed the \$6 million regional authority for continued removal work at the Site.

Conditions at the Site continue to meet the criteria for a removal action under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, (CERCLA), 42 U.S.C. § 9601 to 9675, and Section 300.415(b)(2) of the National Contingency Plan (NCP). The Site continues to meet the criteria for an emergency

exemption from the limit pursuant to Section 104(c)(1)(A) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(c)(1)(A). There are no nationally significant or precedent-setting issues associated with the Site.

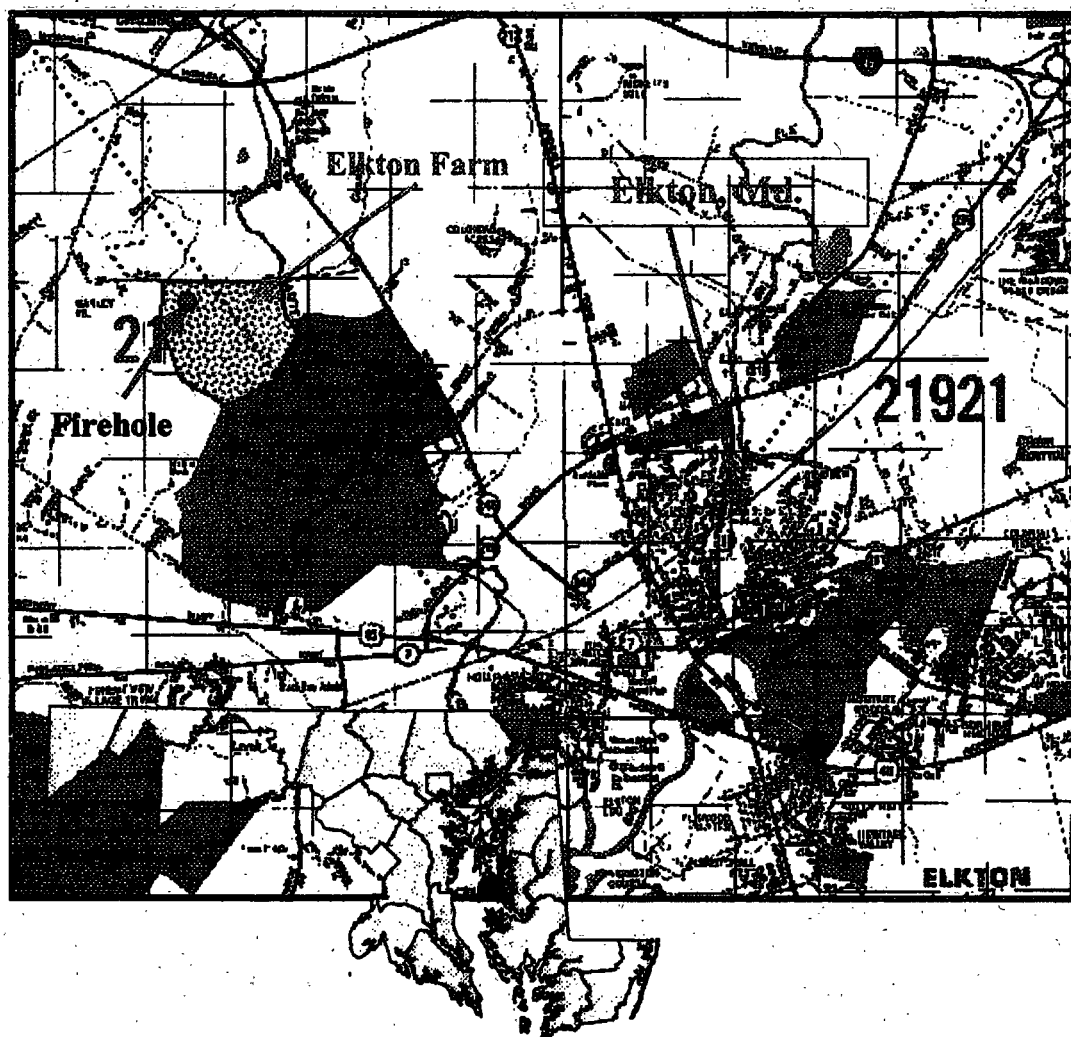
## **II. SITE BACKGROUND AND CURRENT CONDITIONS**

### **A. Site Location, Historical Background**

The Elkton Farm Firehole Site is located two miles northwest of Elkton, Maryland. The Site occupies at least 55 acres (and potentially 150 acres or more) of an approximate 400-acre farm property presently owned by Herron 393 LLC ("Elkton Farm property") (Figure 1). The Firehole parcel is located on the USGS Bayview/Newark West quadrangles at approximately 39°38' north latitude and 75°53' west longitude and has a Maryland grid coordinate of 655,000 N and 1,117,500 E. The site is bounded on the west by Laurel Run, to the north by Zeitler Road, to the East by Little Elk Creek and to the south by ATK Missions Systems Inc. ATK is a private company located at 55 Thiokol Rd., Elkton, Maryland that tests aerospace systems, space systems and weapons systems. A gravel access road bisects the western quadrant of the site. The areas of potential contamination currently identified by EPA are in this western quadrant. Land use surrounding the site is primarily agricultural/residential, with an area of medium to heavy industry property (ATK) to the southeast across Little Elk Creek. (EPA recently determined that a small swath of land along the southern boundary of the Site is in fact owned by ATK. EPA has ceased removal activities on the ATK swath.)

As documented in the prior Action Memoranda, the contamination still to be addressed pursuant to this action memorandum appears to have been left behind during World War II as part of the operations of Triumph Explosives, Inc., which occupied property adjacent to the Elkton Farm property (including property now owned by ATK) and which is further described below. Between 1946 and August of 2006, the Elkton Farm property was owned by various members of the Martin Herron family, who leased much of its fields (including the location of the fireholes), to a farmer for cultivation. (The field cultivated by the farmer included the swath of land at the foot of the farm field owned by ATK.) In August, 2006, the Herron family sold the Elkton Farm property to its present owner, Herron 393 LLC, a land development company associated with the New Jersey-based Windsor Companies, LLC which plans to build a large residential development on it. Current plans are for Herron 393 to develop parcels of the land elsewhere on the 393 acre property, and for the former farm field below Zeitler Road (including the 55-acre site being addressed by EPA) to be used as a water reservoir and utility location to support the proposed development. (The proposed layout of the development, including in the 55-acre area occupied being addressed by EPA, is shown in Attachment C.)

Figure 1 Site Location Map



For additional site historical information, as well as prior site assessment activities undertaken by the Maryland Department of the Environment EPA, (MDE), and the United States Army Corps of Engineers (USACE), please refer to the September 25, 2005 Action Memorandum (Attachment A, pp. 1-6).<sup>1</sup>

<sup>1</sup> As a result of MDE's Site Investigation (SI) activities, the EPA Region III Removal Branch was requested by EPA's Brownfields and Site Assessment Section to perform a Removal Site Evaluation ("RSE") of the MEC, including DMM and any other imminent and/or explosive hazard for determination of a Superfund Time-Critical or Emergency Removal Action. EPA undertook this work in accord with EPA's Interim Final Handbook on the Management of Munitions Response Actions, EPA 505-B-01-001, May 2005. ("EPA Munitions Handbook").

## **B. EPA Site Removal Activities:**

Pursuant to the September 25, 2005 Action Memorandum, in March, 2006 EPA initiated removal activities at the site, acting in part through USACE Baltimore District under an Inter-Agency Agreement (IAG) with EPA Region 3. The 55-acre site as identified in the original Action Memorandum was divided into two distinct geographical areas. Based on the geophysical survey conducted by EPA, Phase I area consists of the surficial (surface to 18 inches below surface) portion of the currently identified 55-acre Site (not including the firehole pits themselves), and the Phase II area comprises the firehole pits themselves, which appear to occupy roughly one-quarter of the site and extend to depths of 3 or 4 feet below the surface. Refer to Attachment D. USACE's unexploded ordnance (UXO) contractor commenced Phase I activities in March, 2006. These activities included the mobilization of personnel, equipment and materials to perform magnetometer surveys ("magging") on a grid-by-grid basis. Each grid covered an area of 100 ft. by 100 ft. The specific process included the placement of two teams, comprised of six certified UXO technicians including health and safety oversight, to walk and scan each grid until every anomaly detected by the metals detectors was investigated. The individual teams were placed in separate grids at a distance calculated to be a safe distance from each other and to the support staff located at the site command post. During Phase I magging and digging activities well over a total of 80,000 individual hand digs were performed by the USACE contractor. Of this number 6,903 munitions of explosive concern (MEC)<sup>2</sup> were detected and either disposed of on site via detonations (when found to be fuzed and contain explosive material) or transported off site for disposal (when found to be unfuzed or inert). In addition, approximately 573 pounds of munitions debris (MD) were detected and disposed off site. Munitions debris are fragments of MEC, and are believed to have been spread throughout the Site by being dragged around the site by farming activity, blown out of the original fireholes when the onsite disposal of these items took place during WWII, or through erosion. The USACE was able to complete 110 grids using the industry standard mag and dig approach before demobilizing in September, 2006 (see discussion below). The 110 grids comprised approximately 40% of the overall site geographical area.

USACE initiated Phase II activities in July, 2006. Phase II activities addressed the north central portion of the site and included the suspected fireholes themselves. The USACE's desired approach was to use heavy up-armored mechanized equipment, including a new large road grader with integrated dynamic sifter and hopper called the "Rangemaster." The Rangemaster had proven successful on seemingly similar type

<sup>2</sup> Under EPA and DoD guidance, MEC includes: (1) Unexploded ordnance (UXO); (2) Discarded military munitions (DMM); or (3) Munitions Constituents (e.g. TNT, RDX) which present in high enough concentrations to pose an explosive hazard. MEC was formerly known as Ordnance and Explosives (OE) in DoD parlance. EPA Munitions Handbook at xix.

<sup>2</sup> Under EPA and DoD guidance, MEC includes: (1) Unexploded ordnance (UXO); (2) Discarded military munitions (DMM); or (3) Munitions Constituents (e.g. TNT, RDX) which present in high enough concentrations to pose an explosive hazard. MEC was formerly known as Ordnance and Explosives (OE) in DoD parlance. EPA Munitions Handbook at xix.

Department of Defense range sites out west. In addition, a trackhoe with a rotating sifting device called the Taz was to aid in the excavation and sifting operations. The Rangemaster's function was to clear the top 18 inches of the suspected firehole areas, and was to have been followed by the Taz excavation to depths of approximately four feet.

Shortly after Phase II activities commenced, the Rangemaster proved to be incapable of sifting the soils adequately and required continuous maintenance to the point where the USACE and EPA determined it to be no longer cost effective. In early August, 2006, the USACE used the Taz to initiate excavation of the fireholes during which debris (including discarded bottles, metal, garbage, tile, boards and other building materials) were encountered. Samples of the debris verified the existence of asbestos in some asbestos cement tile and siding and pipe wrap (asbestos-containing material or "ACM", the majority of which was non-friable) interspersed in the debris. Due to the USACE contract requirements, the presence of ACM rendered the USACE's UXO contractor unable to continue excavation operations in the Phase II area. In September 2006, the USACE and its contractor demobilized from the site.

EPA maintained oversight of all activities during the USACE's work at the Site. After USACE demobilized from the Site in September 2006, EPA maintained 24-hour site security. From October, 2006 through March 2007, EPA competed task orders from its three separate ERRS contractors to complete the munitions removal work and address the newly-identified ACM handling and possible disposal concerns. Based on evaluation of the three proposals by a technical evaluation panel, Guardian Environmental Services Inc., Bear, Delaware (GES) was chosen. GES proposed a soil 'separation using water approach' that essentially would rinse the soils contaminated with MEC through prefabricated screens of various sizes, which is expected to satisfy concerns about both the munitions as well as the ACM since it would remain wet at all times. The soil separation with water approach would address only the work in Phase II. Completion of the remainder of the Phase I grids would utilize the mag and dig approach which proved to be the most cost-effective and safest approach for the surface Phase I area.

In early May, 2007 GES mobilized a UXO subcontractor to resume Phase I activities only. To date, 32 grids have been completed, bringing the cumulative total (USACE and GES combined) completed to 142. The total number of anticipated Phase I grids is approximately 155. During Phase I activities, since EPA remobilized with GES, over 46,000 digs were performed and over 6000 items of MEC have been found (not all of which contained explosive material). EPA anticipates continuing with the mag and dig approach in Phase I and the soil separation using water approach in the Phase II area, pending authorization of this document.

### **III. Site Conditions**

Over the past 50 years the Elkton Firehole Site has been farmed by a farmer under a lease agreement with the property's owner. The farmer had cultivated two or three different types of agricultural crops per year, including wheat, corn, etc. Based on observations made

at the Site by EPA as well as MDE and USACE, this tilling and dragging process appears to have scattered MEC at the surface throughout the Site. Additionally, freeze/thaw cycles over sixty years may also have contributed to the surfacing of MEC. A geophysical survey performed by EPA's START contractor revealed numerous locations/anomalies of potential MEC. In addition, work completed by the EPA Region 3, using both the USACE and by GES in 2006 and 2007, verifies the existence of large quantities of metal anomalies representing MEC, fragments of MEC and ACM. The geophysical survey was terminated at 55 acres due to funding issues and because the hits for MEC tapered off, but it is expected that up to 100 additional acres of the property will have to be assessed for possible MEC. Presently the property owner, Herron 393, is undertaking investigative work on the Elkton Property outside of EPA's 55-acre area of concern under MDE's supervision pursuant to its Voluntary Cleanup Program ("VCP").

An abandoned concrete and steel structure was formerly located in the southwestern portion of the Site, adjacent to a firehole. This structure is known as the Morton Thiokol Rocket Recovery Area (RRA). Morton Thiokol (former owner of the ATK facility) used this facility to test rocket motors in the 1960s. Morton Thiokol removed these structures under the supervision of MDE during July and August, 2005.

As described above, the site is as large as 150 acres (although EPA expects under this action that it will only need to address the 55-acre area of immediate concern, with the rest being addressed by Herron 393 and MDE under the VCP) and is comprised of open farmland bounded by streams and woodlands. As a result, it appears to be too large an area around which to erect security fencing. Therefore, in March, 2005 the OSC posted warning signs alerting trespassers and nearby residents that EPA is conducting a Superfund cleanup, and provided a phone number for questions.

#### **A. Quantities and Types of Substances Present**

As noted in the September 2005 Action Memo, the USACE conducted a site visit on May 28, 2004 during which MEC was identified on the surface of the property. A Resume of USACE Staff site visit stated "What appeared to be projectile nose and tail fuzes, and parts and pieces of pistol flares were observed at the site. There were several areas observed that had no or very little crop growth in relation to the rest of the crop in the area." USACE staff recommended that "Site activities should include a unexploded ordnance (UXO) team providing UXO Safety Support as a minimum. Intrusive activities should provide for on-site disposal of UXO items which are deemed too hazardous to transport over public roadways." Id.

As also set forth in the September 2005 Action Memorandum, MDE's UXO contractor (UXB, Inc.) stated that:

These projectiles may have been loaded with or without high explosives; a detailed inspection of each was not accomplished. Typical primary and secondary explosives



associated with these projectiles, primers, casings and cartridge actuated devices are explosives and propellants for primary explosive initiating mixtures, Lead Azide, Lead Styphnate, Fulminate of Mercury, Fulminating Mercury, Acetone Peroxide, Lead Picrate, and Sodium Azide, and secondary explosives boosters tetrytol, PETN [pentaerythritol tetranitrate] and TNT.

Lead Azide, Lead Styphnate, Fulminate of Mercury, Fulminating Mercury, Acetone Peroxide, Lead Picrate, and Sodium Azide, and secondary explosives boosters tetrytol, PETN and TNT are all classified as "primary" explosives under EPA guidance (Munitions Handbook, p. xv & 3-73), and are considered characteristic reactive under RCRA 40 C.F.R. § 261.23(7) (readily capable of detonation or explosive decomposition). Additionally, Sodium Azide is a listed RCRA hazardous waste (P105). These chemicals are therefore hazardous substances under CERCLA pursuant to 40 C.F.R. § 302.4.

While the impetus for this Removal Action is the potential explosives threat posed by MEC at the Site, EPA evaluated other non-explosive hazardous substances encountered during the Removal action that appear to be related to the historic disposal of MEC and are intermixed with the MEC. Presently, the only known non-explosive hazardous substance identified at the Site is ACM. The ACM includes both non-friable asbestos cement and friable pipe wrap. The friable portion is limited to a small quantity. Although the actual amount of this building debris in the fireholes is unknown, for planning purposes EPA estimates that as much as 11,000 cubic yards of this material may be present in the Phase II area.

Site investigations by EPA, MDE, and USACE, as well as the response work done thus far, have confirmed the presence of DMM and MEC at the Site, at depths up to four feet in the area of the fireholes (see September 25, 2005 Action Memorandum, pp. 6-10, and discussion of completed removal work, above). During activities performed by the USACE, building debris containing asbestos was detected, sampled and analyzed. Asbestos is a hazardous substance under 40 C.F.R. § 302.4. It may be that additional non-MEC hazardous substances will be found (although there is no site historical file info to suggest this.)

#### **C. National Priorities List Status**

This site is not presently on the National Priorities List (NPL).

#### **D. State and Local Authorities' Roles**

The MDE referred the Elkton Firehole site to EPA for a removal action due to its lack of resources to complete this action. The Site is part of a larger project called the Little Elk Creek One Cleanup Program. The purpose of the project is to develop a

<sup>3</sup> Citing U.S. Army Corps of Engineers Pamphlet No. 1110-1-18, "Engineering and Design Ordnance and Explosives Response," April 24, 2000.

collaborative effort among EPA programs, the State, and local officials in the cleanup and revitalization of the Little Elk Creek, Elkton, Md. area. The Maryland Department of the Environment (MDE) has the overall lead of the project and EPA has provided support to them when requested. For further information regarding MDE's activities at the Site, as well as a consult undertaken by the Agency for Toxic Substances and Disease Registry ("ATSDR") focusing on the potential for uptake of nitrosamine compounds by plants, see the September 25, 2005 Action Memorandum at pp. 4-10.

#### **IV. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT**

Section 300.415 of the NCP lists the factors to be considered in determining the appropriateness of response activities. Paragraphs (B)(2)(i), (ii), (iv), (v) and (vii) apply to the need for response at the Elkton Farms Firehole Site as follows:

**300.415(b)(2)(i)** *Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants*

On May 28, 2004 the USACE, Ordnance and Explosive Safety Specialists, Baltimore District, Md., at the request of MDE, performed a site visit to assess unexploded ordnance hazards. The following Resume of Site Visit document dated June 06, 2004 concluded "MEC-related items were discovered on the surface of the property visited. Approximately 8 acres were covered in the site visit walkover. Crops are growing on the site. The site is reported to be farmed year round. What appeared to be projectile nose and tail fuzes, and parts and pieces of pistol flares were observed at the site. There were several areas observed that had no or very little crop growth in relation to the rest of the crop in the area." The Resume recommended that "Site activities should include a unexploded ordnance (UXO) team providing UXO Safety Support as a minimum. Intrusive activities should provide for on-site disposal of UXO items which are deemed too hazardous to transport over public roadways."

On June 29, 2004 the USACE Baltimore District issued a draft Risk Assessment Code Score (RAC) for the Site. The RAC score is utilized by the USACE to prioritize response actions at Formerly Utilized Defense ("FUD") sites. The RAC score for this site was 1(II-A). This score depicted the evaluation to be a high risk with a severity category of critical. The narrative portion of this document revealed "The Navy paid for the construction of over 500 buildings to be used by the contractor TEI for the manufacture of ordnance (40mm shells) and other ordnance related products. A walkover was conducted in the suspected area of the former firehole on 28 May 2004. Numerous suspect MM/MEC-related items were observed during the site visit."

At the request of the EPA Site Assessment Manager (SAM) and in coordination with the FOSC, the Agency for Toxic Substances and Disease Registry (ATSDR) performed a health consult focusing on the potential for uptake of nitrosamine compounds

by plants. ATSDR issued its preliminary Consult dated 06/01/05, and its final Consult on 12/22/05. According to the final Consult, "ATSDR does not expect that chemical concentrations in surface soil from the Firehole portion of the site will pose a public health concern for adults or children residing near or visiting the Firehole portion of the site in the future, if appropriate measures (e.g. the proposed removal actions) are taken to eliminate contact with the elevated levels of contamination identified in the various sampling investigations." This action will complete the removal action reviewed by ATSDR.

This site continues to represent an imminent and substantial threat to human populations as a result of findings of DMM and MEC in numerous grids both within the Phase I and Phase II geographical area.

300.415(b)(2)(ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems

In May 2003, MDE collected five groundwater samples from site monitoring wells and analyzed them for total and dissolved metals, VOCs, SVOCs, pesticides and PCBs, nitroaromatic compounds, and perchlorates. MDE also collected a water sample from a domestic well to evaluate background groundwater conditions.

- A trace level (below a health-based screening value) of 4-amino-2,6-dinitrotoluene (0.015 µg/L) was detected in one of the two samples from MW-2. (4)

Presently, no drinking water source is affected by these concentrations. However there is the potential for drinking water contamination. Removal of the presumed source materials at this site (MEC) should assist with minimizing this potential threat to drinking water presented by the MEC.

300.415(b)(2)(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate

As previously mentioned in this memorandum (Section IIB), the Elkton Farm site is scattered with potentially thousands of unexploded MEC. The draft USACE Risk Action Code (RAC) Summary Document dated June, 2004 rated this site as Category I, (if this response was being handled by DoD under its Military Munitions Response Program (MMRP) would require immediate response). In addition, based on findings by the USACE under IAG with EPA during 2006 removal activities, numerous MEC items such as 40mm projectiles, 81mm mortar rounds, and numerous other components and remnants are present at the Site, all of which are considered to be of explosive concern.

300.415 (b)(2)(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released

The Elkton Farm property lays at the confluence of Little Elk Creek with Laurel Run. Natural drainage on the site is in a generalized north to south direction. There is a slight drainage divide on the property which directs surface runoff to either Laurel Run or Little Elk Creek. Surface water infiltrates the soil to groundwater, or is discharged via overland flow to Laurel Run or Little Elk Creek. 4

Laurel Run discharges into Little Elk Creek which flows southward into Big Elk Creek and eventually to the Chesapeake Bay.

The farthest upstream probable point of entry for the surface water route originates at the on-site drainage ditch on the Zeitler Road border of the site. The drainage ditch travels west for approximately 500 feet before emptying into Laurel Run, a perennial freshwater stream and a fishery. Laurel Run flows 0.625 miles to its confluence with Little Elk Creek. The area of the confluence of Laurel Run and Little Elk Creek is classified as Palustrine Aquatic Bed wetlands. Little Elk Creek flows south southeast for approximately 4.0 miles before emptying into the Big Elk Creek. Big Elk Creek flows approximately 2.25 miles to the point where it empties into Elk River. Elk River flows approximately 12.0 miles to its confluence with the Chesapeake Bay. The 15-mile surface migration pathway ends in the Elk River three miles from the confluence of Elk River with the Chesapeake Bay. The Elk River is classified as Estuarine intertidal wetlands and is a fishery.

Washout is evident on the site. Numerous metal objects representing fuses, shells, detonators are visible in the site drainage ditches throughout the site. Adverse weather conditions including heavy precipitation potentially can carry these objects towards Laurel Run and Little Elk creek.

300.415 (b)(2)(vi) Threat of fire or explosion

As previously noted in this memo, DMM and MEC are present in numerous grids within both the Phase I and Phase II areas. These represent the primary threat to be addressed by this removal action. This DMM and MEC pose a significant threat of explosion to passersby, and any others who may come across or disturb these materials.

## **V. ENDANGERMENT DETERMINATION**

Actual or threatened releases of hazardous substances, pollutants or contaminants from this Site, if not addressed by implementing the response actions outlined in this funding request, may present an imminent and substantial endangerment to the public health, welfare, or the environment.

## **VI. PROPOSED ACTIONS AND COSTS**

---

4 No perchlorates were detected in any of the groundwater samples.

The Removal Action proposed is designed to mitigate the imminent threat by completing the removal of the MEC and any TNT-contaminated soil at the Site, and staging on site any non-MEC containing construction debris for subsequent disposition by the property owner. Specifically, EPA's proposed actions include the following:

**A. Proposed Actions**

1. Continue and complete Phase I area mag and dig activities;
2. Continue site security with a security guard during non-working hours to protect equipment and warn trespassers;
3. Continue maintenance of erosion, sedimentation and storm water control measures to minimize release of MEC from the site
4. Store large MEC and explosive material in two Alcohol Tobacco and Firearm (ATF)-inspected explosive magazines preparatory to onsite destruction of these items per #10 below;
5. Initiate and complete removal of MEC/DMM at depths ranging from surface to four feet below surface within the Phase II area using a water-based soil separation approach;
6. In the Phase II area, separate and stage onsite ACM (including separately double bagging and staging friable pipe wrap in accordance with 40 C.F.R. § 61.145) and other construction debris from which MEC has been separated. (The staged materials may be subsequently addressed under the MDE-VCP program following completion of this removal. Such activity is not within the scope of this removal action.)
7. Ensure proper soil stabilization measures are in place through final site restoration activities such as grading and revegetation;
8. Demobilize all personnel and equipment and materials from the site and demobilize site security measures;
9. Dispose of non-fuzed material offsite in accordance with Section 121(d)(3) of CERCLA and 40 C.F.R. 300.440;
10. Perform onsite destruction (detonation) of fuzed and large MEC items;
11. Perform all Site activities in accordance with an approved health and safety plan.

## **B. Contribution To Remedial Performance**

The Site has not been proposed for the NPL, therefore there are no Remedial Actions planned for the Site at this time. However, the proposed Removal Action is consistent with Superfund cleanup policy that applies to both Remedial and Removal sites and will contribute to and not impede future Remedial action and/or MDE voluntary cleanup procedures, at the Site.

## **C. Compliance With ARARs**

Superfund regulations require that removal actions attain applicable, or relevant and appropriate, requirements (ARARs), to the extent practicable considering the exigencies of the situation. ARARs address a chemical-specific, action-specific, or location-specific requirement at a CERCLA site. Section 121(e)(1) of CERCLA provides that actions carried out under CERCLA do not require federal, state or local permits.

ARARS for this action include:

National Emission Standard for Hazardous Air Pollutants, Asbestos Standard for Demolition and Renovation (40 C.F.R. § 61.145 and 150) (Relevant and appropriate).

ARARs were requested from the Maryland Department of the Environment and are presented below. The OSC intends to consider the State's substantive aspects and standards identified below to the extent practicable considering the exigencies of the situation.

Code of Maryland Regulations (COMAR):

26.02 Provides limits on the maximum allowable levels of noise at the site boundaries during site remediation work to protect the health, general welfare and property of the people of the State.

26.08 Protects and maintains the quality of surface water in the State. Establishes criteria and standards for discharge limitations and policy for anti-degradation of waters of the State. Any contaminated groundwater entering the surface water must meet ambient water quality criteria. Discharge of treated groundwater must meet State NPDES limits.

26.11 Provides ambient air quality standards, general emissions standards, and restrictions for air emissions from construction activities, vents, and treatment technologies such as incinerators. Also includes nuisance and odor control.

26.17 Provides that any land-clearing, grading, other earth disturbances require an erosion and sediment control plan. Provides that stormwater must be managed to prevent off-site sedimentation and maintain current site conditions.

#### **D. Estimated Costs**

Under an Interagency Agreement between the EPA Region III and the USACE-Baltimore District, the EPA oversaw the USACE removal activities during the spring and summer of 2006. Due to the findings of non-MEC material such as asbestos and the potential for additional findings of non-MEC hazardous substances, EPA determined that use of one of its ERRS contractors would be the most cost effective and safest to accomplish the disposal and handling of MEC and potentially other containerized CERCLA hazardous substances.

Therefore, due to this change in proposed resources and identification of new information such as the debris laden ACM, additional money will be needed in excess of \$6 million to complete this action.

	<b>Current Ceiling</b>	<b>Proposed Ceiling</b>	<b>New Ceiling Increase</b>
<b>Intramural Cost Total</b>	\$ 200,000	\$ 200,000	\$ 400,000
<b>Regional Removal Total Allowance Costs</b>	\$ 5,350,000	\$ 5,500,000	\$ 10,850,000
<b>Other Extramural Not Funded from Regional Allowance (Start, CLP)</b>	\$ 350,000	\$ 200,000	\$ 550,000
<b>Direct Costs</b>	\$ 5,900,000	\$ 5,900,000	\$ 11,800,000

#### **VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Without removal of the munitions and explosives of concern/discarded military munitions which are described in this Action Memorandum, there is the potential for one of these devices to seriously injure a site trespasser, farmer or resident in the area. There is also the potential for washout of these munitions into nearby Laurel Run Creek or Little Elk Creek.

## VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues pertaining to the Elkton Farms Firehole Site.

## IX. ENFORCEMENT STATUS

The EPA Region III Office of Enforcement has been provided with all background information relative to this site (see attached Confidential Enforcement Addendum). On August 5, 2006, EPA entered into a settlement with Herron 393 whereby EPA agreed to not assert a potential windfall lien against Herron 393 under Section 107(r) of CERCLA, 42 U.S.C. 9607(r) in return for the payment of \$263,000.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$: 11,800,000.<sup>5</sup>

Direct Extramural Costs:	\$11,400,000
Direct Intramural Costs:	\$ 400,000
Total Direct Costs:	\$11,800,000
Indirect Costs:	\$ 7,316,000
(62% of Direct costs)	
Total Estimated Cost:	\$19,116,000

The OSC has provided the EPA Removal Enforcement Section with information available to pursue any and all enforcement actions pertaining to the Site. A summary of all enforcement activities to date is attached as an addendum to this document.

---

<sup>5</sup> Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of Site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.



**X. RECOMMENDATION**

This decision document represents the selected removal action for the Elkton Farm Firehole Site, in Elkton, Cecil County, Maryland developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the criteria for a Removal Action as set forth in Section 300.415 of the NCP, 40 C.F.R. § 300.415. I recommend your approval of the proposed removal action. The total removal action project ceiling if approved will be \$11,800,000 of this an estimated \$11,250,000 comes from the Regional removal allowance.

APPROVED: *Dr. Park Boelina* DATE: 9-24-07

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

ATTACHMENT Confidential Enforcement Addendum